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Program Logic Models as a Tool for Planning and Evaluating Workplace Health Promotion Programs

What is a Program Logic Model?

A program logic model is a diagram of your program showing its main components and activities and the expected short-term and long-term outcomes. The diagram also shows which activities are connected to which outcomes, as well as the inter-relationship between the various outcomes. It is called a *logic* model because the connections that are drawn show the rationale or logic on which the program is based. A logic model is best drawn following a needs assessment because it will show how the program you have in mind will address the problems or needs you found to be most important. The logic model can then be updated as your program evolves.

Preparing a Logic Model

Experience has shown that having a program logic model that has been developed in collaboration with key stakeholders serves as a very strong foundation for planning and prioritizing your evaluation activities. Having an agreed-upon logic model is one of the first and most concrete steps you can make toward a successful evaluation plan. The following steps should be followed in preparing a logic model for your own program.

- Identify the main *components* of your program. These reflect program activities that can be grouped together because they have common short-term objectives. Usually, if the short-term objectives are somewhat different, the program activities would be organized in the model in separate components. For example, educational activities about *smoking cessation* and a *stress reduction* seminar might be seen as two separate components involving different activities and expected outcomes. To help identify your program components, ask yourself "what are the main things we do to accomplish our goals?" Develop a short name for each component and list it across the top of a blank page.
- On a separate sheet of paper list your program objectives. In doing so, distinguish between the activities or services you are hoping to implement and the outcomes or changes you hope to achieve. The planned activities or services are your *process objectives*, and the expected changes are your *outcome objectives*.

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- For each of the program components listed across the top of your chart, list the process objectives that go with that component. There are usually more than one. These objectives reflect the main activities or services you provide, to whom, and if possible, over what timeframe. Don't get too detailed as it will interfere with your using the model to communicate what you do in your program. You can always back up your model with separate documentation.
- Do the same on the bottom portion of the chart with your outcome objectives. Think about the timing of the outcomes and their relationship to each other. Some may be attainable in the short term, while others are long-term and only occur after other preceding objectives have been met. Thus, there is presumably a causal ordering or rationale linking the outcome objectives. Draw these logical connections between outcomes.
- Lastly, draw a line from each set of process objectives to the short-term outcomes expected as a result of successfully implementing these activities and services. Here you are drawing the causal linkages that not only show what goes on in your program, but also why it should create the changes you anticipate.

Experience has shown that having a program logic model that has been developed in collaboration with key stakeholders serves as a very strong foundation for planning and prioritizing your evaluation activities.

The following are some hypothetical examples of process and outcome objectives for a workplace health promotion program aimed ultimately at the prevention of cardiovascular disease. The verb in the objective statement usually gives a clue as to which are process and which are outcome objectives. Process objectives typically use verbs of action while outcome objectives use verbs that reflect a change, or prevention of a change.

Examples of Process Objectives

- To provide workshops on nutrition emphasizing fatty diet and health risk
- To distribute health promotion posters about healthy eating
- To provide self-test pamphlets on nutrition
- To include low-fat alternatives in cafeteria and dispensing machines

Examples of Outcome Objectives

- To *increase* awareness of health risks and fatty diet
- To *decrease* fat intake by 20% over two years
- To *decrease* illness rates due to cardiovascular disease

The chart that follows shows a simplified version of a logic model for this same program. It reflects the logical or causal ordering of these objectives. To illustrate the structure and content of program logic models, an additional example is provided from a rural health promotion program in Perth County, Ontario.

Putting It to Work for Your Program

It is important that you recognize the value of having a logic model for planning and prioritizing your evaluation activities. It is a tool to guide you and your committee systematically through all aspects of your program and to help you focus the evaluation on very specific questions and issues. It is an excellent strategy for generating discussion and achieving consensus on the main purpose of the evaluation and how your evaluation resources will best be used. It can also serve as a tool for monitoring the ongoing evolution of your program and keeping it on track. For example, when someone comes up with an idea for a new program component or activity, you can ask how it fits into the program and contributes to the objectives you have spelled out in the model.

Logic Model of Rural Health Program

Main components	Planning and organization committee	Health and safety	Stress management	Coping with change	Positive self-image/ image of farming
Process objectives	• to conduct needs assessment survey • to produce profile of needs assessment data • to obtain community input on data and develop operational plan • to establish rural health coordinating committee to implement plan • to establish set of initiatives activities to organize goals of the plan • to review and evaluate progress in achieving goals of the plan	• to teach health and safety practices re: pesticide use with info sheets and newsletters • to provide opportunity to increase awareness about importance of testing well water • to develop behaviours to use SUN SENSE products (e.g., sunscreen and hats) • to coordinate healthy eating initiatives with existing services (e.g., public health) • to promote awareness of available community-based opportunities to be physically active	• to plan and implement a workshop on communication and conflict resolution for farm families • to encourage the use of effective stress management skills	• to develop and implement a workshop for farm families on coping with change in the farm family • to develop and encourage the use of effective skills to cope with change	• to promote a positive public image of farming and rural life through a farm hiker tour
Outcome objectives: Short-term	• to increase knowledge about needs of rural community • to improve quality and effectiveness of rural health programs and activities • to increase activities and programming that meet identified health needs	• to increase awareness and use of health and safety practices in farming • to increase the use of safe laundering practices during pesticide spraying • to increase use of sun protection devices (e.g., hats) • to increase healthy eating practices • to increase frequency of well water testing • to increase daily physical activities of farm families	• to improve skills in communication and conflict resolution in the farm family	• to increase capacity to cope with change in farming and farm life	• to improve public image of farming • to increase positive self-image of farmer
Long-term	• to reduce incidence of specific health problems (e.g., skin cancer, CVD)				
	• to improve health and quality of life in the rural community				

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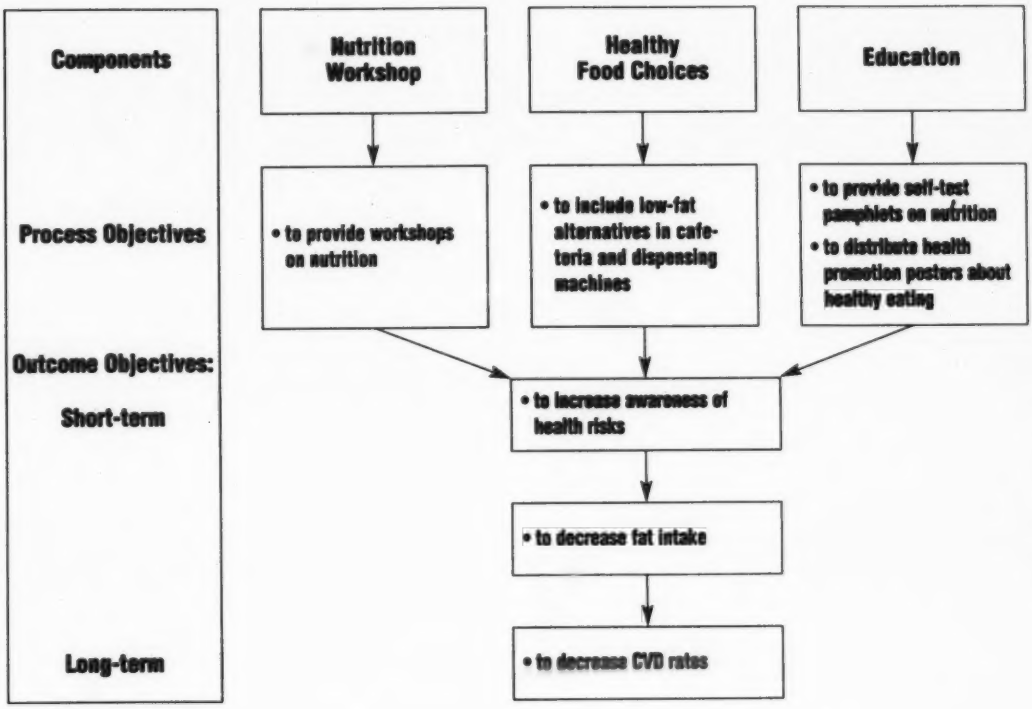
Simplified Example of Logic Model for Hypothetical Nutrition-Based Program for CVD Prevention


Components
Nutrition Workshop
Healthy Food Choices
Education
Process Objectives
• to provide workshops on nutrition
• to include low-fat alternatives in cafeteria and dispensing machines
• to provide self-test pamphlets on nutrition
• to distribute health promotion posters about healthy eating
Outcome Objectives:
Short-term
• to increase awareness of health risks
• to decrease fat intake
Long-term
• to decrease CVD rates

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Publication authorized by the Minister of Health.

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Ce document est aussi offert en français sous le titre : Le modèle logique de programme : Un outil pour planifier et évaluer les programmes de promotion de la santé en milieu de travail

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Cat. No. H39-540/2000E
ISBN 0-662-29228-6

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Key Principles and Practices of Program Evaluation

Program evaluation has its roots in the principles and methods that have been used in social science research since the Second World War. While these scientific roots still influence how we plan and implement evaluations of health and social programs today, we began to think about program evaluation differently in the late 1970s and 1980s. Evaluation has become less of a scientific, "academic" enterprise that passes judgment on the overall value of a program and more of an integral part of good program planning and management. Feedback on how the program is operating as well as outcomes and cost-effectiveness is seen as critical for making good decisions about improving the program and making the best use of resources.

The various steps in the Workplace Health System help you achieve a clear Action Plan for program development and implementation. The following key principles and practices of program evaluation will help you move from your Program Action Plan to an Evaluation Plan. This plan will monitor your progress and help you make ongoing improvements to your program.

Principle 1

Effective evaluation is more about understanding how we learn and change than it is about judgment and measurement.

As noted above, evaluation used to be viewed primarily as a scientific, *research-oriented* enterprise. Such evaluations were often controlled by people external to the program. Evaluation has now become more *action-oriented*, promising to help guide program delivery and improve outcomes. The evaluation is usually controlled internally even if an external consultant is brought in to help. In order to develop a healthy culture for evaluation, it is important to explore attitudes towards evaluation among the key people involved. Barriers to evaluation must be identified and strategies developed to overcome these barriers.

Principle 2

Every program should be able to undertake some evaluation activity. Start small and gain confidence as you go.

One of the barriers to effective evaluation is the attitude that it is a "big" thing, typically imposed near the end of a program. Evaluation should be seen as a series of activities that occur all the way through the life of the program. It is important that you start small and gain confidence as your expertise develops. One way of starting small is to focus on one question, or a very small number of questions.

Another way of starting small is to focus your attention on specific aspects of the program rather than trying to evaluate the program as a whole. For example, your workplace program probably reflects the three potential avenues for program development identified in the Health Profile and Health Plan:

- improving personal health practices
- supporting or strengthening personal resources
- improving the work environment

Within each of these avenues you may also have different components such as a stress management workshop, work design committee, smoking cessation program, health fair, etc. As a way of getting started, narrow your attention to those components for which feedback seems most important.

Principle 3

People who have a stake in the process and outcomes of the evaluation should be *directly involved* in the entire evaluation process.

As with other aspects of the WHS process there is much to be gained by involving key people in the evaluation process. Different stakeholders will be interested in different questions and issues. Early in the planning of your evaluation activities devote time to determine what questions will be addressed, and from whose perspective. A single evaluation project or activity cannot hope to meet the information needs of all the relevant stakeholders. You must be selective and prioritize what feedback is most important.

Principle 4

Evaluation is best done *by* the program, not *to* the program, and through a staged approach.

It is important that you, and your committee, own the evaluation process. Evaluation consultants should be viewed as experts "on tap, not on top." When you view evaluation as an internal enterprise it is important that you carefully consider the advantages of this strategy, and the supports and training you might need. For example, while your questions and methods will be more grounded you may need training or consultation in certain areas.

There is a close relationship between program *planning* and program *evaluation*, and there are several types of evaluation that fit into the planning and evaluation cycle: needs assessment, process evaluation, evaluation of participant satisfaction, outcome evaluation, and economic evaluation. These different types of evaluation often proceed in stages that coincide with stages the program itself is going through. For example, outcome evaluation should be undertaken only after the program has gone through its growing pains and you are confident it is operating well enough to make the achievement of outcomes feasible. Similarly, it makes little sense to undertake a complicated cost-benefit or cost-effectiveness study if you don't yet have evidence of positive outcomes.

Principle 5

Evaluation should proceed with a thorough and common understanding of the program activities and their connection to expected outcomes.

People working closely with the program often have different understandings of the program objectives and the activities to be undertaken to achieve them. They also often have very different views on *why* these particular activities will affect these particular outcomes. For some, their reasoning may be based on past experience, intuition, or professional judgment. For others, their sense of the "why" will be based on a particular program theory.

The task of describing the program and understanding its rationale and objectives is greatly facilitated by drawing a conceptual diagram of the main program components and activities, and their connections to the expected outcomes. These diagrams are known as *program logic models*. Agreeing upon a program logic model is one of the first and most concrete steps towards a successful evaluation plan. It identifies the main components of your program. A logic model also requires that you make a distinction between the activities or services you hope to implement and the outcomes or changes you hope to achieve. The planned activities or services are your process objectives. The changes you expect to achieve are your *outcome objectives*.

Reviewing your program logic model as a group will help you decide whether certain components of the program are of particular concern or whether specific objectives require more immediate feedback. It will also show whether people are more interested in how well the program is running (i.e., process), or in the results being achieved (i.e., outcome). In other words, it will help you sort out who wants to know what, why they want to know it, and where to invest your evaluation resources.

Principle 6

Evaluation should proceed with a clearly understood purpose and a realistic written plan.

Effective planning and management of the evaluation process requires a clear written plan. It includes at least the following elements: background and purpose; program description and rationale (logic model); evaluation questions; measures, design and data collection and analysis strategies; timeline, roles and responsibilities, and process for review; strategy for using the results; costs of internal and external resources. The written plan builds

upon the program logic model and specific evaluation questions that arise from various parts of the model. The general approach to answering these questions must be agreed upon (i.e., qualitative and/or quantitative), and specific measures and data collection strategies selected. It is also critical that the process for using the evaluation results be clearly identified.

By writing a clear evaluation plan, and adhering to the six principles and practices of evaluation practice discussed above, you should be able to take concrete steps in moving from your Program Action Plan to an Evaluation Action Plan.

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Cat. No. H39-543/2000E
ISBN 0-662-29231-6

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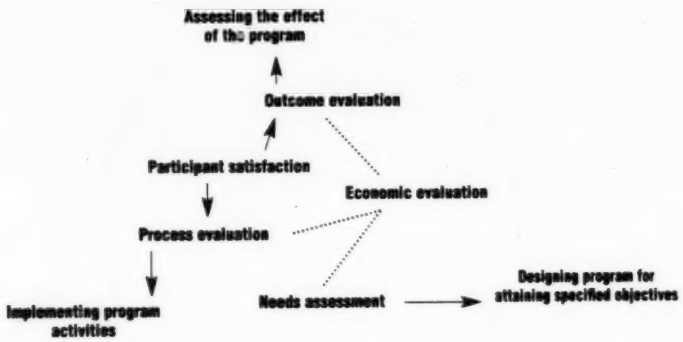
Different Types and Stages of Program Evaluation

One barrier to effective evaluation is the attitude that it's a big thing typically imposed at the end of a program in order to give it a pass or fail grade. It is much more helpful to see evaluation as a series of activities that occur throughout the life of the program. It is also helpful to think of evaluation as happening in stages which coincide with the stages the program itself is going through. The following chart shows the main types of program evaluation and indicates the ongoing, circular nature of program planning and design.

Relationship Between Program Planning and Development and Different Types of Program Evaluation



The five types of program evaluation are: needs assessment, process evaluation, evaluation of participant satisfaction, outcome evaluation and economic evaluation.

Needs assessment, a well-defined step in the Workplace Health System, is most relevant before the program is designed and implemented. It shows the problems and needs to be addressed by the program. Information from the needs assessment guides the development of the program's objectives, and the activities to meet these objectives.

Process evaluation is particularly relevant in the early days of program development and implementation. The questions addressed in the evaluation often ask whether the program has been implemented as planned and whether it serves the people for whom it was intended. The quality of program implementation is also examined.

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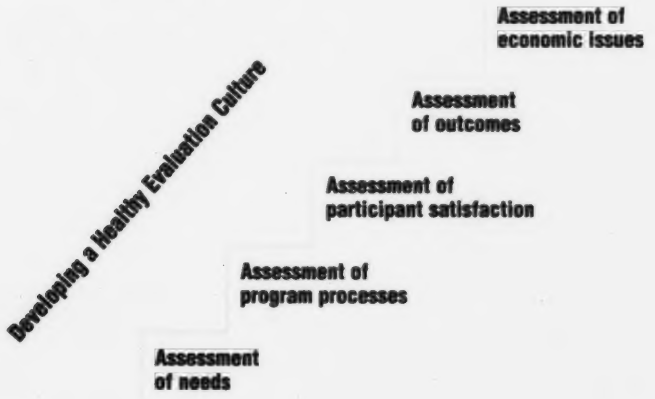
Assessing **participant satisfaction** can provide early feedback that the program is not meeting the needs of the people involved. It also helps at a later stage to signal a potential drift from the original mandate.

Outcome assessment tries to answer questions about the impact of the program on participants, and the workplace generally. It is most relevant when you're confident the program is operating well enough to make the achievement of outcomes feasible. An outcome evaluation tries to determine what changes have occurred and the contribution of program activities in causing these changes.

A staged approach to evaluation is critical to planning evaluation activities. As you begin asking and answering more complex questions, you are really engaged in the development of a healthy culture for evaluation in your program.

Economic evaluation of costs in relation to benefits obtained makes sense only after you have good evidence about positive outcomes. Some economic evaluations, however, focus only on assessing the program costs. This information can be helpful in the early stages of the program, sometimes in conjunction with information from a process evaluation.

A staged approach to evaluation is critical to planning evaluation activities. As you begin this process of asking and answering more complex questions over time, you are really engaged in the development of a healthy culture for evaluation in your program. The questioning attitude ingrained in this culture will become part of your daily thinking and practice.



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Cat. No. H39-539/2000E
ISBN 0-662-29227-8

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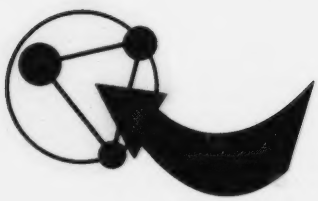

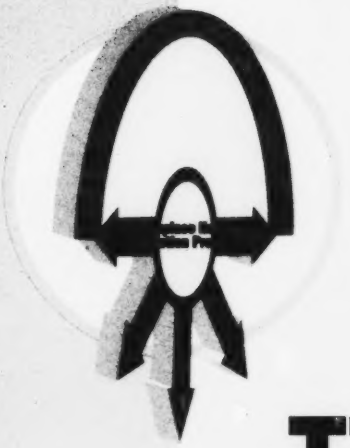

Do Workplace Health Promotion Programs Work?

This sounds like a question with a straight-forward answer, especially after a couple of decades of evaluation studies. Unfortunately, questions about the effectiveness of health promotion programs are not so easily answered.

The difficulty lies partly in the problems encountered conducting evaluation studies in real world settings such as the workplace. For example, some benefits of health promotion may be difficult to measure, especially in the short-term. Also, many things influence a person's health and well-being, making it difficult to rule out other reasons for changes you have measured. Perhaps most importantly, people have different ideas about what it means to say your program is "working." To a Chief Executive Officer (CEO) or manager of a small business, it may mean the morale of employees is improved, better employees are being recruited in a competitive market, or costs due to absenteeism are reduced. For a health professional it may mean people's health is improved due to reduced stress, a better lifestyle, or a healthier work environment. To a worker, saying that the program "works" may mean it has given them a greater sense of participation in the workplace and more control over issues affecting their health. Clearly, deciding whether a health promotion program is "working" depends on your perspective and expectations.

Many comprehensive evaluations of workplace programs have been done. Several critical reviews of the literature have also summarized what we "know," and identified major gaps in our knowledge. The published evaluations are "research-oriented" evaluations that use rigorous methods and statistics to determine the impact of the program. Some studies examine costs in relation to this impact. These studies also pay considerable attention to factors affecting the participation of workers in health promotion programs. Most studies are designed to generalize the results to other situations, including yours.

There are several things to keep in mind as you review the findings from published evaluations:

- Little attention has been given to outcomes related to the broader work environment as opposed to risk factors relating to individual lifestyles.
- It isn't always clear whether workers themselves participated meaningfully in the evaluation and whether it addressed questions that were important to them.
- Questions about how the program operated and questions about outcome were often not addressed in the same study. Therefore, we don't know much about why some studies show positive outcomes and others don't.

- Little information about outcomes, cost-benefit, and cost-effectiveness is available beyond a two- to five-year follow-up period.
- Many different types of programs have been evaluated. These have been aimed at different outcomes such as fitness, smoking, nutrition, and have involved very different program activities. This makes it difficult to find clear patterns across the studies.

How strong and consistent are the results of published outcome and economic evaluations? The following statements can be made with some confidence:

- People who have written critical reviews of this literature agree the "weight of the evidence" suggests health promotion programs in the workplace can produce positive outcomes and be a good investment for the employer — returning benefits larger than program-related costs. They also agree, however, that better designed evaluations are needed.
- The best designed evaluations with at least a two-year follow-up yield a similar conclusion about the weight of the evidence. Many more positive results are found than negative results.
- While there are more positive than negative findings, the evaluations provide few clues explaining inconsistencies. Poor program implementation and low participation are implicated in some studies for the negative findings.
- While program participation is often quite low, the level of participation also depends on the type of program and how participation is defined.
- The evidence is reasonably good that participation can be increased, and outcomes improved, through program activities such as outreach, personal follow-up contact, peer support, buddy systems, organizational support, and offering a variety of alternatives.

Spend time sorting out what different people expect from the program. Develop shared objectives and a participatory approach to your own evaluation activities.

Summary

Do health promotion programs in the workplace work? Yes, in some settings, with some types of programs. The research literature suggests that your interventions need to offer more than health risk screening and health education. Personal outreach and organizational support systems contribute to program effectiveness and cost-effectiveness.

Are the research findings strong and consistent enough to provide a solid foundation for your own program development? Yes, you can be guardedly optimistic. Be cautious, however, not to promise something you can't deliver. Spend time sorting out what different people expect from the program. Develop shared objectives and a participatory approach to your own evaluation activities.

Do we know key features of effective program planning and management? Mostly yes, but the knowledge comes from collective experience rather than research. Most experts agree that successful programs are based on meaningful participation of stakeholders, comprehensive needs assessment, clear and written objectives, strong program rationale and design, and a clear implementation and evaluation plan.

Although our knowledge base from comprehensive evaluations needs to develop even further, it does provide a reasonably strong foundation for your own local planning process, program development, and evaluation activities.

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Cat. No. H39-541/2000E
ISBN 0-662-29229-4

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What do Worksites Expect from Their Health Promotion Programs?

The Importance of Expectations

Planning, implementing and evaluating a workplace health promotion program involves a lot of different people or *stakeholders*. All have their own reasons for participating in this process. The connection between these reasons and the type of program eventually put in place is clear — the program should meet the expressed needs. However, the reasons for participating also influence the type of evaluation and the specific evaluation questions to be addressed. For example, if employers are looking for ways to reduce costs related to absenteeism, they will be most interested in having the evaluation examine the extent to which this occurred. If the workers are expecting the program to give them more influence over health and safety practices and to reduce on-the-job stress, this will be their interest in the evaluation. Similarly, a health professional involved in your committee may be looking to the program to reduce particular health risks (e.g., smoking, alcohol use). Monitoring these risks then becomes the focus for the evaluation. The different reasons for participating, and their implication for planning and evaluation, need to be discussed early in your process.

Why do different worksites get involved in workplace health promotion? It is especially important to understand these reasons since you may have to "market" the program to company managers or members of the farming community. Furthermore, long-term funding and commitment for these programs depends on their contribution to outcomes that senior managers value.

What the Research Tells Us

We could learn much more about the reasons behind worksite participation. Some published reports summarize what we know and the gaps in our information. In Canada, the results of a study published in 1993 gives us some insight, at least for large companies. Most of the available information comes from large organizations rather than small businesses and farms.

Richard Wolfe and his colleagues were particularly interested in comparing the motivations of senior managers making budgeting decisions and health professionals involved in program design and administration. A case study approach was used in nine major organizations in Alberta that implemented a worksite health promotion program with a fitness facility. Twenty-two interviews were undertaken with the senior manager responsible for adopting the program, a senior manager responsible for approving the annual budget, and the senior health promotion professional. Supplementary questionnaires were completed, as well as a review of program documents.

So what reasons did these people give for adopting and maintaining a health promotion program? Basically, they cited:

- potential benefit for recruiting employees
- symbolic sign of commitment to employees
- belief that healthier employees are happier and more productive
- expectation of improved morale and job satisfaction
- humanistic concerns for well-being of employees and their families
- adoption of similar programs by other "leading" organizations in their industry
- cost savings (This was of the least importance for senior managers, and was fourth in importance for health professionals.)

It is important to determine what various stakeholders in your planning process hope to achieve and to consider the implications of their expectations for your evaluation activities.

However, one cannot generalize the findings of this study to the broader Canadian context. Only a few organizations were selected and all the programs were based on a fitness facility. Since the researchers only looked at companies which already had a program, the results don't speak to the motivations of senior managers who decided *against* instituting a program. Finally, motivations for adopting a program no doubt change over time and the programs examined here were developed during the economic boom of the late 1970s and early 1980s. Different motivations may come into play during periods of recession and downsizing.

These limitations aside, this study carries a very important message for planning and evaluation. There is no question that comprehensive published evaluations of workplace programs have concentrated on "bottom line" issues such as productivity and cost savings related to health care and absenteeism as well as health-related outcomes. Such benefits, although important to some, can overshadow other issues central to adopting and maintaining these programs. Thus, the research challenges conventional wisdom about why employers implement health promotion programs.

What About Your Program?

What are the lessons here for your own planning and evaluation activities? First, test your own assumptions about what various stakeholders want to achieve, particularly employers contributing money or other resources. Develop shared objectives among the stakeholders to help plan your program and evaluation activities. If this process is rushed you run the risk of developing a program based on false assumptions which doesn't meet the needs of the workers. Second, selling the program on the basis of certain expectations has implications for your evaluation. Some outcomes will be harder to measure than others (e.g., health status compared to absenteeism; cost savings compared to improved morale and job satisfaction). Some outcomes may be best measured using a primarily *quantitative* approach (e.g., absenteeism, cost savings) versus a primarily *qualitative* approach (e.g., improved

recruitment of employees, morale and job satisfaction). Also, some outcomes will take longer to assess than others and cost more to measure (e.g., showing savings through cost-benefit analyses compared to illustrating improved morale and job satisfaction through focus groups).

In summary, it is important to determine what various stakeholders in your planning process hope to achieve and to consider the implications of their expectations for your evaluation activities.

Further Reading

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Ce document est aussi offert en français sous le titre : Quelles sont les attentes du milieu de travail à l'égard de ses programmes de promotion de la santé?

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Cat. No. H39-542/2000E
ISBN 0-662-29230-8

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Process Evaluation

What is Process Evaluation?

Different kinds of evaluation are necessary at different stages of a program. In the early stages of working through the Workplace Health System process, you will be monitoring the development of your committee, the conduct of your needs assessment and the development of your program ideas into a Program Action Plan. As the worksite program takes shape and you begin to implement various activities and events, your evaluation shifts from planning and needs assessment to monitoring program implementation and operation. At this point, you are not yet asking questions about program impact. The focus of the evaluation may be on program *coverage* (i.e., is the program reaching the people it's intended for?), program operation (i.e., is the program operating smoothly and as intended?), or program *quality* (i.e., has the program been implemented according to acceptable standards?). These the are general types of questions addressed in process evaluation.

Getting Started

There is no single approach to conducting process evaluation. As with other types of evaluation you must first decide on specific questions to be answered. This is best done by having a group of people involved with the program (often called stakeholders) develop a program logic model. This model is a conceptual diagram of the program. It includes program objectives — objectives about program implementation and operation as well as expected outcomes. The group systematically works through the model, raising questions, debating issues, and determining what kinds of feedback would be helpful. Feedback will be needed on many different aspects of program implementation and operation.

Evaluation Questions and Information Gathering

The questions that arise in discussing *process objectives* in the logic model are the potential questions to be addressed in a process evaluation. The group you are working with needs to select the most relevant questions. You then gather the information needed to answer these questions. A plan to use the information in your decision-making is also necessary before you go too much further.

Sometimes the information is readily available. The ideal situation is one in which you work through your plans for evaluation when you first plan your program activities. At this point you are also deciding what records your

program must keep. This gives you the opportunity to collect some of the necessary evaluation information as part of your routine program documentation. In other situations you will have to collect new information to answer your evaluation questions.

Some strategies for collecting information for process evaluation include:

- review of program records
- review of program documents
- focus groups or interviews and program participants with participants or other stakeholders
- observation of the program in action
- surveys of the "target population"

This begs the question as to what is feasible for process evaluation in your situation. The following examples illustrate different strategies that you can adapt.

Example: Large Corporation

You are working with a large corporation on a multi-faceted program involving workshops and other events focussing on health education and lifestyle, stress management, and a pilot project involving flexible work conditions. From the beginning, your committee has felt it important to track participation in the program within various departments of the organization and among different employee groups. This information is seen as critical for planning promotional activities and making sure the content of the program is relevant to as wide a group of employees as possible. The information is also needed to interpret an evaluation of program impact planned for next year — to see if the results can be generalized to all employees.

Two evaluation questions are posed:

1. What proportion of employees have participated in various activities?
2. Is participation higher or lower for certain groups of employees: men or women; older or younger; blue collar or white collar; day or night shift?

In developing computer records or written forms of documentation, you will define "participation" for each activity (e.g., does attendance for only part of a workshop still count as participation?), and record the appropriate information on an ongoing basis. The information is summarized at regular intervals and the level of participation of various subgroups will be determined.

Example: Small Business

You are working with several small businesses in your community and have a variety of presentations and events planned for the next year that will rely on volunteers and "in-kind" donations. Your committee has concerns that some of the events may not get off the ground. They would like to have good documentation at the end of the year

showing their accomplishments, and the reasons some things didn't turn out well. Such information is needed to plan activities in the future.

Two evaluation questions are posed:

1. What events were successfully implemented over the one-year period?

2. What factors contributed to limited success or cancellation of other events?

If carefully planned, a process evaluation can provide considerable insight into ways to improve the design and delivery of your program.

At the start of the year an evaluation manual is put together that lists all the events planned for the year. A notation is made of the supports that are needed and the attendance expected. This serves as a handy checklist to monitor how many of the events are held and the actual level of participation. In addition, the coordinators of the various events will record their impressions of why things went smoothly, the glitches that occurred, and which anticipated supports didn't materialize. The completed manual will serve as a program diary providing valuable "lessons learned" for planning next year's events. It is supplemented by information from other sources such as participant feedback questionnaires or informal interviews with a group of volunteers.

Example: Farm Community

You are working with the farm community in your area and are having a difficult time getting more than a handful of farm families to participate in the workshops and other community events that your committee has put together concerning health and safety on the farm.

One evaluation question is posed: Why have some farm families chosen not to participate in any of the activities?

You decide to ask a small number of farm families, who you know haven't been involved in any of your activities, to give you some feedback. You do this through brief personal interviews or through one or more focus groups. In either case, you will plan ahead so the interviews or focus group(s) are guided by a list of topics about farm health and safety, the activities you put on, and their decision not to participate. In running a focus group you will plan for about six to eight participants, and will have a trained person facilitate the discussion and another person record it, recording as much of the discussion as possible. The themes that emerge in your analysis of the discussion will give you insight into the reasons for lack of participation.

Putting It to Work for Your Program

These are examples of process evaluation activities. Note than none of these examples ask questions about the change in knowledge, attitude, behaviour, or other relevant outcomes among program participants. Such questions are the focus of outcome evaluation. Process evaluations, however, should not be seen as second-class evaluations. Indeed, they are critical for showing people *how* you had hoped to achieve the outcomes, and whether they were

indeed feasible. Process evaluations also help explain why particular outcomes may not have been achieved. For example, the program may not have been properly implemented in the first place. If carefully planned, a process evaluation can provide considerable insight into ways to improve the design and delivery of your program.

Further Reading

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Publication authorized by the Minister of Health.

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Ce document est aussi offert en français sous le titre : Évaluation du processus

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Cat. No. H39-544/2000E
ISBN 0-662-29232-4

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Economic Evaluation

Different kinds of evaluation are necessary at different stages of a program. Questions about the cost of different parts of your program will be relevant at the planning and need assessment phase. After the program has taken shape, questions arise about the actual costs involved and whether things could be done more efficiently. At an even later stage, if evidence has been gathered showing that the program is achieving positive results, questions can be asked about the cost of the program as compared to the economic value of these benefits. Questions can also be asked about whether there are less expensive ways of achieving the same or even better outcomes. These are the general types of questions addressed in economic evaluation.

Getting Started

There is no single approach to conducting economic evaluation. As with other types of evaluation, you must first decide on specific questions to be answered. This is best done by having a group of people involved with the program (often called stakeholders) develop a program logic model. This model is a conceptual diagram of the program. It includes program objectives — objectives about program implementation and operation as well as expected outcomes. The group systematically works through the model, raising questions, debating issues, and determining what kinds of feedback would be helpful. Feedback will be needed on different aspects of program costs as well as costs in relation to outcomes. This sets the stage for economic evaluation.

Evaluation Questions and Information Gathering

One thing that all economic evaluations have in common is the analysis of program costs. If your evaluation questions concern the cost of different parts of your program, your program logic model will be helpful in deciding how to allocate your costs. For example, if your program involves a health screening component, an education/awareness component, and a one-to-one lifestyle counselling component, you would want to estimate the total cost of each component, and the cost per participant for services/activities provided. You need to gather information that will help distribute costs to the different components of the program.

Costs also need to be estimated *from a particular perspective*. The perspective may be that of the program participants, the sponsoring organization/workplace, or society as a whole. For example, if you were analyzing costs from the perspective of the sponsoring organization, you would exclude the cost of meeting space or volunteer time donated by the community. The societal perspective is often undertaken to allow for a more complete assessment of costs (e.g., community meeting space or volunteer time would be costed in terms of what this space and time would be worth if put to another purpose).

Some costs are *direct* costs, such as salaries, while others are *indirect* or overhead costs such as office space, administration. In order to distribute these costs across the various program components you may need people to monitor the time they spend in various program-related activities. The end product of the cost analysis may be the cost per participant for the different services/activities with which they are involved. This then sets the stage for a full economic evaluation that would look at these individual costs in relation to outcomes achieved.

Cost-effectiveness analysis is preferred over cost-benefit analysis because it involves fewer assumptions and doesn't try to affix a monetary cost to the outcomes achieved.

Going beyond an analysis of costs, the two most common strategies for full economic evaluation are *cost-benefit* analysis and *cost-effectiveness* analysis. In cost-benefit analyses both costs and outcomes are expressed in dollars and one determines the net benefits gained (benefits-costs). Because both sides of the equation are defined in monetary terms, cost-benefit analysis allows you to compare a program designed for one purpose with a program designed for another (e.g., a program to reduce high risk drinking compared to smoking cessation or the reduction of stress in the workplace). The analysis may, however, only focus on one program to see if the benefits outweigh the costs. Whether you are focussing on one program or comparing two or more programs, there are many issues to consider in conducting a cost-benefit analysis and using the results. For example, many benefits may not occur for quite some time in the future while costs are current; some benefits are "intangible" and hard to measure; and results can be changed dramatically by shifting the perspective from which cost and benefits are tallied and calculated.

Compared to *cost-benefit* analysis, *cost-effectiveness* analysis does not convert the impact of your program to a dollar value. It is used when you have a good quantitative measure of outcome and you want to compare alternative means of achieving this outcome (e.g., two strategies to reduce stress in the workplace or two strategies to help people quit smoking). Cost-effectiveness analysis is always comparative and always uses a common measure of outcome. Cost-effectiveness analysis of health promotion programs is preferred over cost-benefit analysis because it involves fewer assumptions and doesn't try to affix a monetary cost to the outcomes achieved.

What is feasible for economic evaluation for your program? It is difficult for someone to offer specific advice since it depends considerably on the resources that are available, your program objectives and whether you've been able to demonstrate positive outcomes. For cost-effectiveness analysis, the opportunities you have for a comparison group will also determine what is feasible. You should start your work on economic evaluation with an assessment of costs across the different parts of your program, and from different perspectives. If you have positive results on the outcomes you have been trying to achieve, you can then go on to evaluating costs in relation to these outcomes. Your "best bet" for cost-outcome evaluation will be for you to try two different strategies to achieve a particular outcome, and then compare the ratio of costs to outcomes across the two alternatives.

The accompanying *Program Evaluation Manual: Key Issues and Strategies for Evaluating Your Workplace Health Promotion Program* (available through Health Canada) provides more details on planning and implementing economic evaluation.

This is one in a series of factsheets produced by Health Canada to assist businesses in the development and evaluation of workplace health promotion programs. For more information about Health Canada's Workplace Health System, visit our Web site at http://www.hc-sc.gc.ca/healthpromotion

Publication authorized by the Minister of Health.

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Ce document est aussi offert en français sous le titre : Évaluation économique

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Cat. No. H39-545/2000E
ISBN 0-662-29233-2

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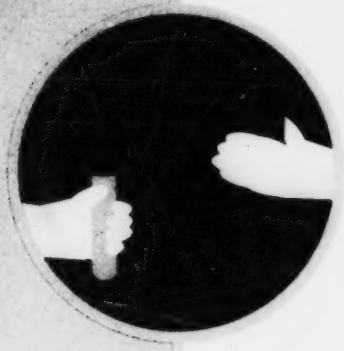
Economic Evaluation



Outcome Evaluation

What is Outcome Evaluation?

Different kinds of evaluation are necessary at different stages of a program. Outcome evaluation is usually undertaken when you are confident your program is running smoothly and according to plan. However, since you may need to establish what the situation was before your program got going (i.e., a baseline), outcome evaluation may need to be planned early on.

With outcome evaluation, the evaluation questions focus on the changes that have occurred in the *program participants* (e.g., knowledge, attitude, confidence in their ability to do new things, health-related behaviour), or the work environment (e.g., health and safety features, work design, smoking policy, nutrition level of cafeteria food). Your evaluation activities are designed to measure such changes. However, your evaluation also has the more difficult task of showing clearly that your program should get the credit for these changes, or at least some of the credit.

Building a strong case can become complicated because it may be difficult to measure change in a consistent, valid, and appropriate way. Other problems occur because we don't live in a neat and tidy world and there will be several other explanations for changes you have measured. There is no such thing as an absolutely "airtight case" that provides irrefutable evidence about the program's contribution to the expected outcomes. What you aim for is the best information possible and a reasonable level of confidence in linking program activities and outcomes. It is also your responsibility to think about and discuss other explanations for your results.

Getting Started

Other than these two steps — of measuring change and then trying to attribute it to your program — there is no single approach to conducting an outcome evaluation. As with other types of evaluation you must first be clear what specific questions will be answered through the evaluation process. This is best done by having a group of people involved with the program (often called stakeholders) develop a program logic model. This model is a conceptual diagram of the program. It includes two types of program objectives — objectives about program implementation and operation as well as expected outcomes. The group systematically works through the model, raising questions, debating issues, and determining what kinds of feedback would be helpful. Feedback will be needed on the achievement of your outcome objectives and this paves the way for outcome evaluation.

Evaluation Questions and Information Gathering

The questions that arise in discussing short- and long-term outcome objectives in the logic model are the potential questions to be addressed in the outcome evaluation. You, and the group you are working with, need to select the questions that are the most relevant and the most *feasible* for you to address. The logic model will show the connections between the expected outcomes and you will have to determine where in the sequence you will focus your attention. For example, your intervention may be expected to influence knowledge, attitudes, self-efficacy, health behaviour, health status, and, eventually, work satisfaction, productivity, and absenteeism. In deciding what to measure for outcome evaluation you must take into account the time that has lapsed for this sequence to have played itself out and the quality of the measures you have available to assess each type of outcome.

There is no such thing as an absolutely "airtight case" that provides irrefutable evidence about the program's contribution to the expected outcomes. What you aim for is the best information possible and a reasonable level of confidence in linking program activities and outcomes.

Having determined the focus of your evaluation and the specific evaluation questions, you can then design your evaluation and gather the information needed to answer these questions. A plan to use the information in your decision-making is also necessary before you go too much further.

Since you are in the business of measuring changes in your program participants and the workplace, it makes sense to establish first what the situation was like before the program activity occurred. For some evaluation questions you may be able to use baseline information from the needs assessment survey (e.g., has the proportion of employees who smoke decreased?) In other situations, you may have to establish a baseline with newly collected information. For example, if your needs assessment didn't ask about attitudes towards smoking in the workplace, you would have to collect this information before you could determine if your program changed attitudes. In still other situations, you may not have the opportunity to establish a baseline. For example, when conducting a brief educational seminar in the workplace to increase knowledge about second-hand smoke, you may not have enough of people's time to ask many baseline questions. You can still ask participants whether they think the seminar has made them more knowledgable and give examples of how they might use that information. This is better than getting no feedback at all. Without a baseline, however, you need to be careful in stating that they are more knowledgable. Furthermore, without another group of people to compare them to, you need to be rather guarded with statements that your seminar made them more knowledgable than they might have been otherwise.

Thus different strategies for outcome evaluation give you more or less confidence in attributing a positive change to your program. Your options for designing an outcome evaluation are as follows:

- outcomes measured only after the program
- outcomes measured once before and once after the program
- outcomes measured at several points in time before and after the program
- outcomes measured before and after the program and compared to another *matched* group of people (or companies) who did not receive the program
- outcomes measured before and after the program and compared to another randomly selected group of people (or companies) who did not receive the program

These alternatives reflect a very quantitative approach to outcome evaluation, i.e., comparing different groups of people on various outcome measures. A qualitative approach can also be used either as the main methodology or to complement quantitative methods. For example, a qualitative approach might involve focus groups or semi-structured interviews with program participants exploring issues related to outcomes. Observation of the program in action and review of key documents and reports may also help you identify themes illustrating changes that may be attributable to the program.

Finally, your outcome evaluation questions reflect the outcome objectives. It will probably be easier to focus on short-term outcome objectives rather than longer term objectives. For example, it will be easier to measure changes in knowledge and attitudes about smoking than to measure a change in smoking or reduced incidence of heart disease and lung cancer. You may not have time to follow participants for a long enough period to be confident of a behaviour change. It takes even longer still, and probably will require large numbers of people in the evaluation, to show a reduction in the rate of heart disease or cancer.

Putting It to Work for Your Program

What is feasible for outcome evaluation in your program? It is difficult for someone to give you specific advice without knowing the resources that are available, your outcome objectives and how easily they can be measured, and the opportunities you have for a comparison group. The reality is that resources for evaluation are usually limited, as are the opportunities to compare participants in your program to another *similar* group of people who are not involved in the program. The most common situation will be for you to compare your program participants and the work environment *before* and *after* your program activities have been implemented. You should view this as the minimum standard for outcome evaluation with a quantitative approach measuring the achievement of your outcome objectives. You should also be able to complement the statistical assessment of your outcome objectives with qualitative information obtained from focus groups, interviews, or direct observation.

The accompanying *Program Evaluation Manual: Key Issues and Strategies for Evaluating Your Workplace Health Promotion Program* provides more details on planning and implementing outcome evaluation.

Further Reading

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Cat. No. H39-538/2000E
ISBN 0-662-29223-5

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